

Fig. 1: β -tubulin genes in *Physcomitrella patens*

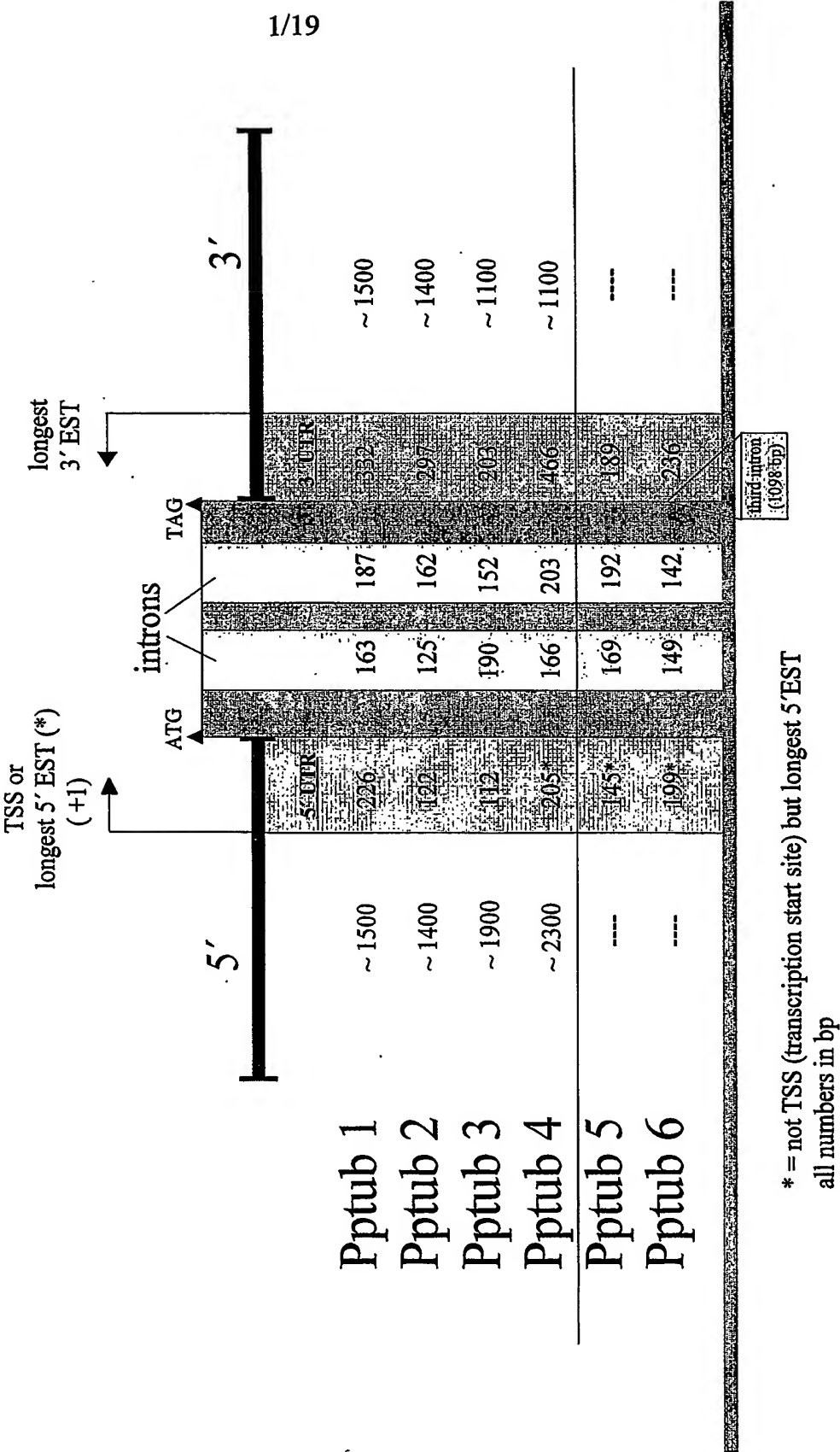


Fig. 2: Analysis of expression promoting regions of β -tubulins in *Physcomitrella patens*

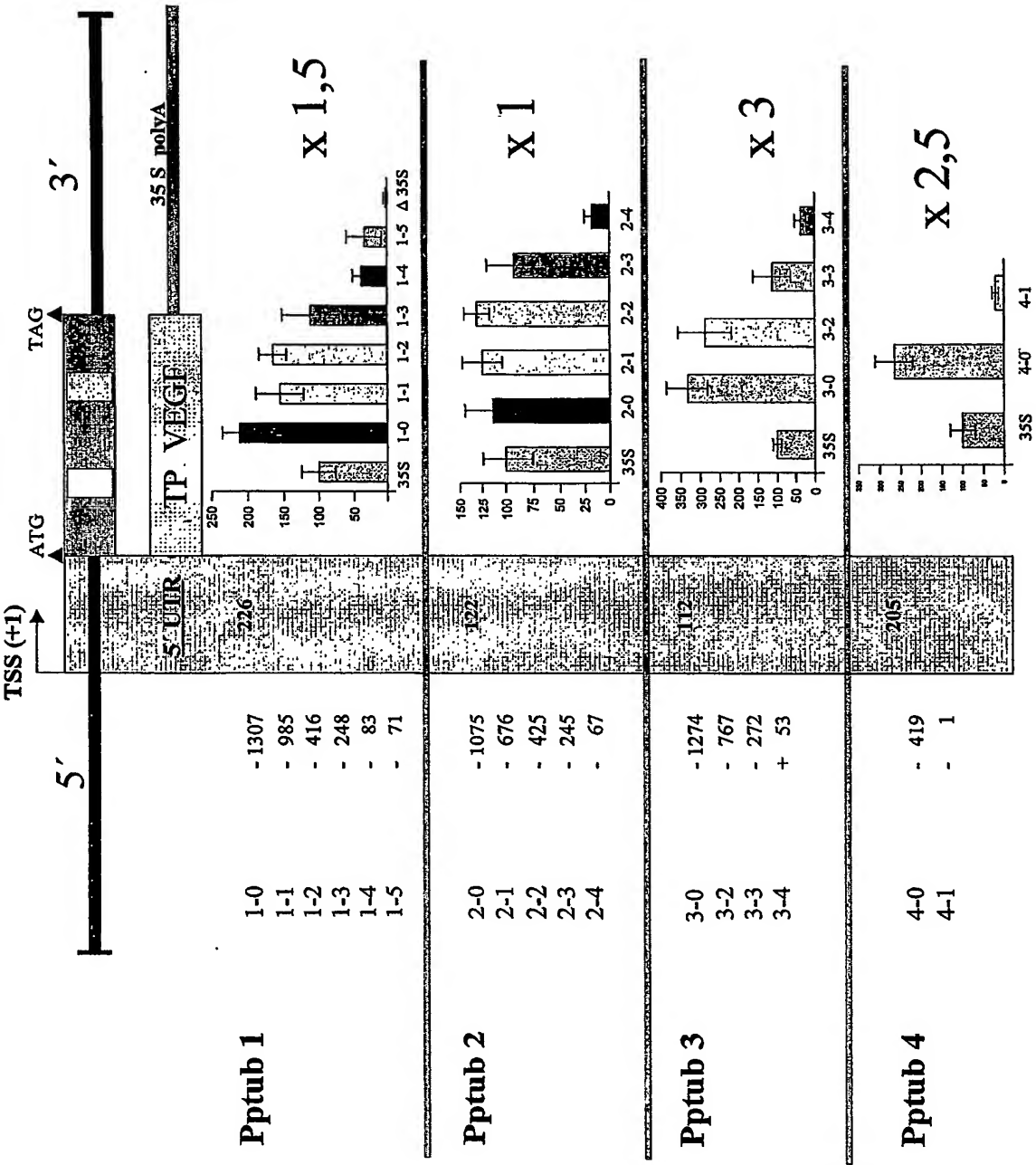
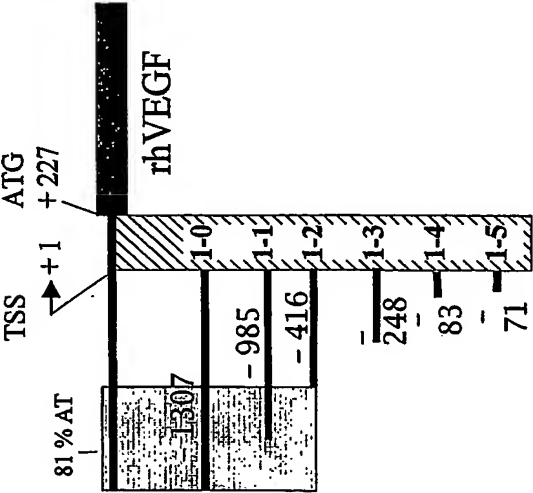


Fig. 3: Analysis of expression promoting regions of Pptub 1 by transient transformation of rhVEGF constructs

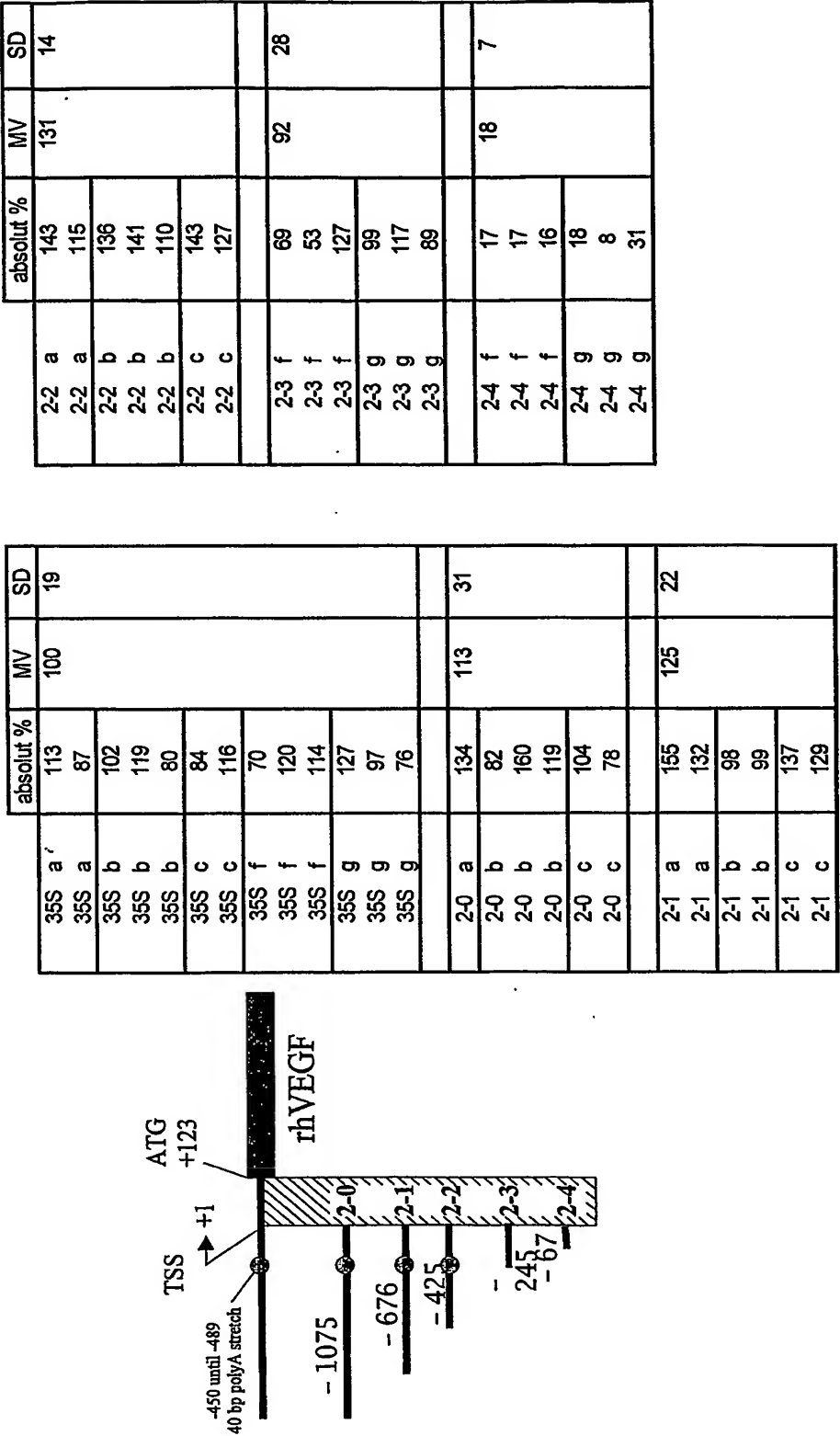
	absolut %	MV	SD
1-2 a	184	165	19
1-2 a	150		
1-2 a	173		
1-2 c	148		
1-2 c	187		
1-2 c	148		
1-3 d	150	111	41
1-3 d	85		
1-3 d	56		
1-3 e	119		
1-3 e	94		
1-3 e	164		
1-4 c	44	39	12
1-4 c	46		
1-4 c	53		
1-4 f	40		
1-4 f	33		
1-4 f	18		
1-5 f	6	34	26
1-5 f	9		
1-5 f	25		
1-5 e	36		
1-5 e	59		
1-5 e	70		
delta 35S e	5	2	3
delta 35S e	0		
delta 35S e	0		

	absolut %	MV	SD
35S a	122	113	54
35S a	80		
35S a	98		
35S b	98		
35S b	309		
35S b	119		
35S c	107		
35S c	89		
35S c	104		
35S d	133		
35S d	99		
35S d	69		
35S e	93		
35S e	68		
35S e	139		
35S f	147		
35S f	78		
35S f	75		
1-0 a	247	212	23
1-0 a	197		
1-0 a	195		
1-0 c	234		
1-0 c	195		
1-0 c	204		
1-1 a	145	155	34
1-1 a	129		
1-1 b	165		
1-1 b	135		
1-1 b	144		
1-1 d	119		
1-1 d	179		



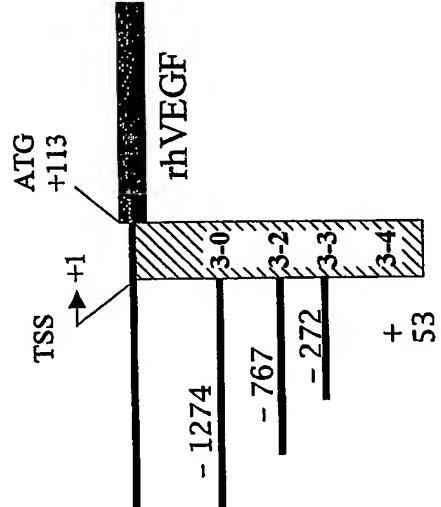
a - f: different transformations
SD = standard deviation
35S mean value (MV)
of each transformation was set to 100%

Fig. 4: Analysis of expression promoting regions of Pptub 2 by transient transformation of rhVEGF constructs



a - b, f and g: different transformations
SD = standard deviation
35S mean value (MV) of each transformation was set to 100%

Fig. 5: Analysis of expression promoting regions of Pptub 3 by transient transformation of rhVEGF constructs

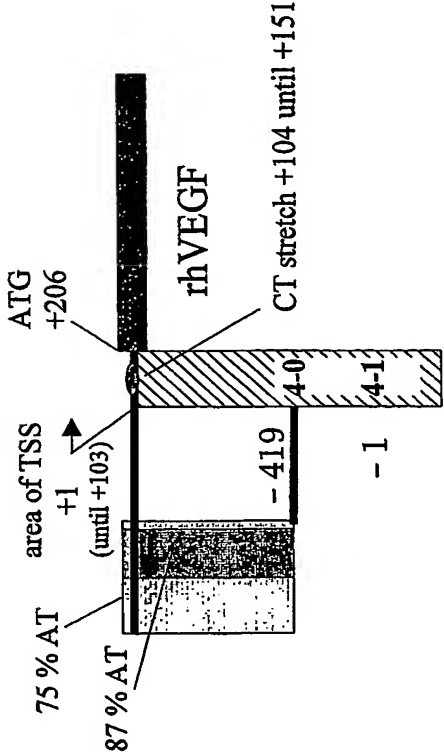


a - b, d and e: different transfections
SD = standard deviation
35S mean value (MV) of each transformation was set to 100%

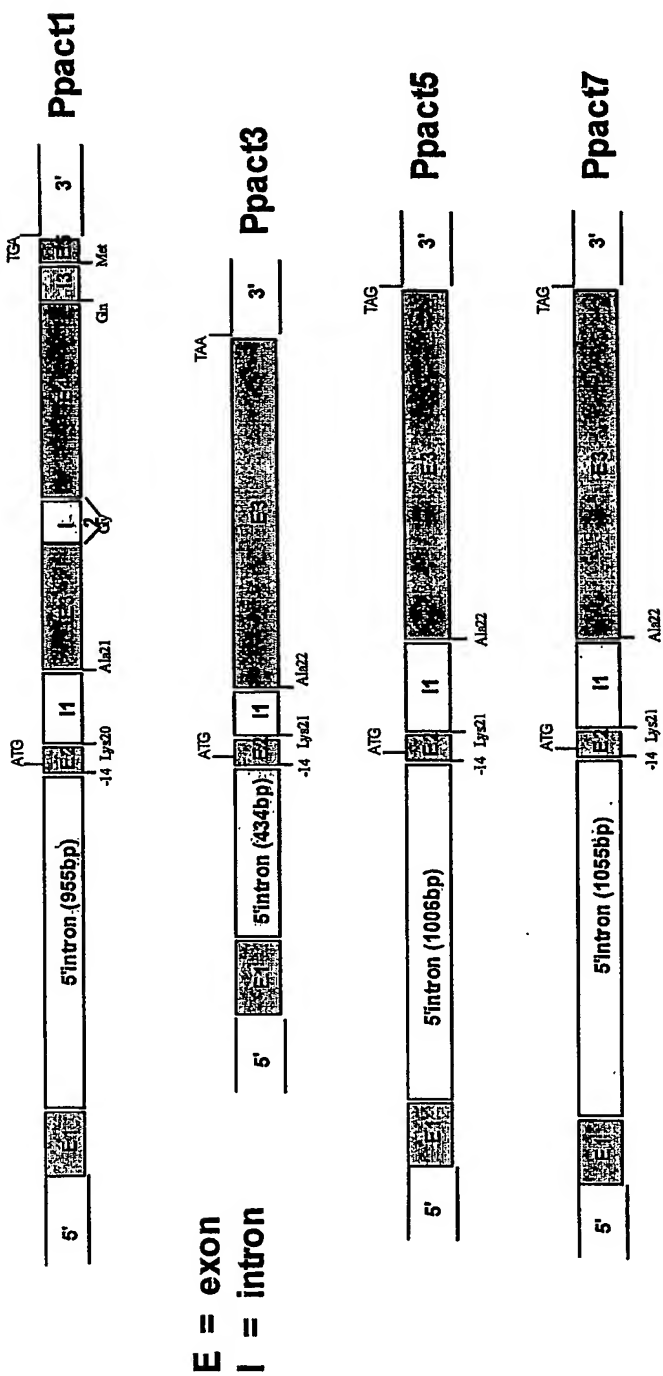
	absolut %	MV	SD
35S a	100	100	11
35S a	95		
35S a	105		
35S b	118		
35S b	81		
35S b	101		
35S d	94		
35S d	112		
35S d	94		
35S e	93		
35S e	89		
35S e	118		
3-0 e	293	332	52
3-0 e	251		
3-0 e	353		
3-0 b	387		
3-0 b	330		
3-0 b	379		
3-2 a	231	287	69
3-2 a	239		
3-2 a	247		
3-2 b	399		
3-2 b	348		
3-2 b	259		
3-3 b	138	112	49
3-3 b	104		
3-3 b	191		
3-3 d	44		
3-3 d	96		
3-3 d	101		
3-4 a	27	37	15
3-4 a	16		
3-4 a	46		
3-4 b	55		
3-4 b	50		
3-4 b	28		

Fig. 6: Analysis of expression promoting regions of Pptub 4 by transient transformation of rhVEGF constructs

	absolut %	MV	SD
35S a	63	100	30
35S a	95		
35S a	141		
35S c	70		
35S c	121		
35S c	109		
4-0 a	290	265	45
4-0 a	322		
4-0 a	229		
4-0 c	210		
4-0 c	273		
4-1 a	25	20	8
4-1 a	22		
4-1 a	5		
4-1 c	19		
4-1 c	30		
4-1 c	18		



a and c: different transformations
SD = standard deviation
35S mean value (MV) of each transformation was set to 100%



5'sequences resulting from iPCR:

- Ppact1:** 2973 bp until ATG: 1824 bp promoter / 955 bp 5' intron
- Ppact3:** 3091 bp until ATG: 2270 bp promoter / 434 bp 5' intron
- Ppact5:** 3095 bp until ATG: 1909 bp promoter / 1006 bp 5' intron
- Ppact7:** 3069 bp until ATG: 1805 bp promoter / 1055 bp 5' intron

Fig. 7: Genomic structure of *Physcomitrella patens* actin genes.

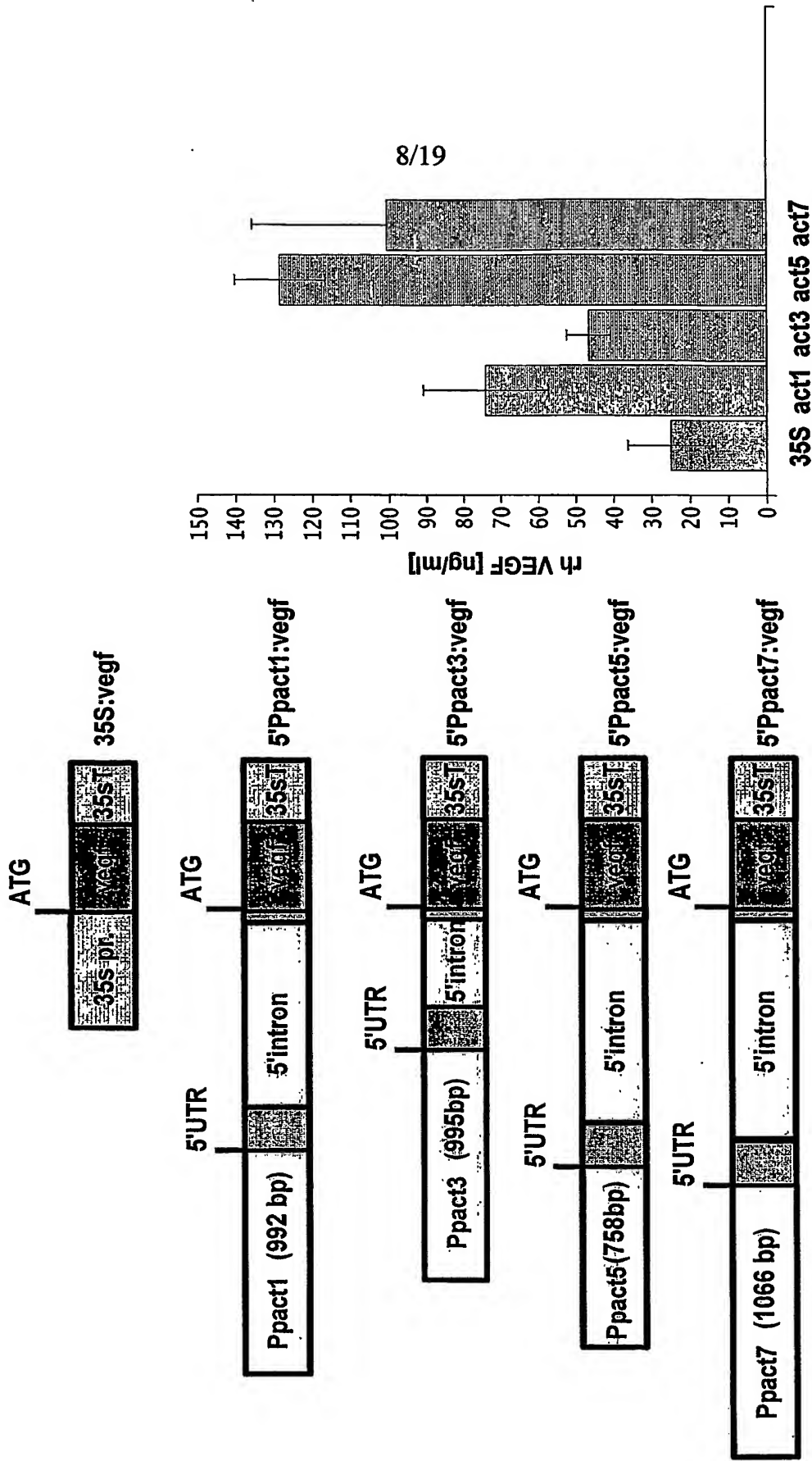


Fig. 8: Comparison of the expression activity of the different 5'actin regions.

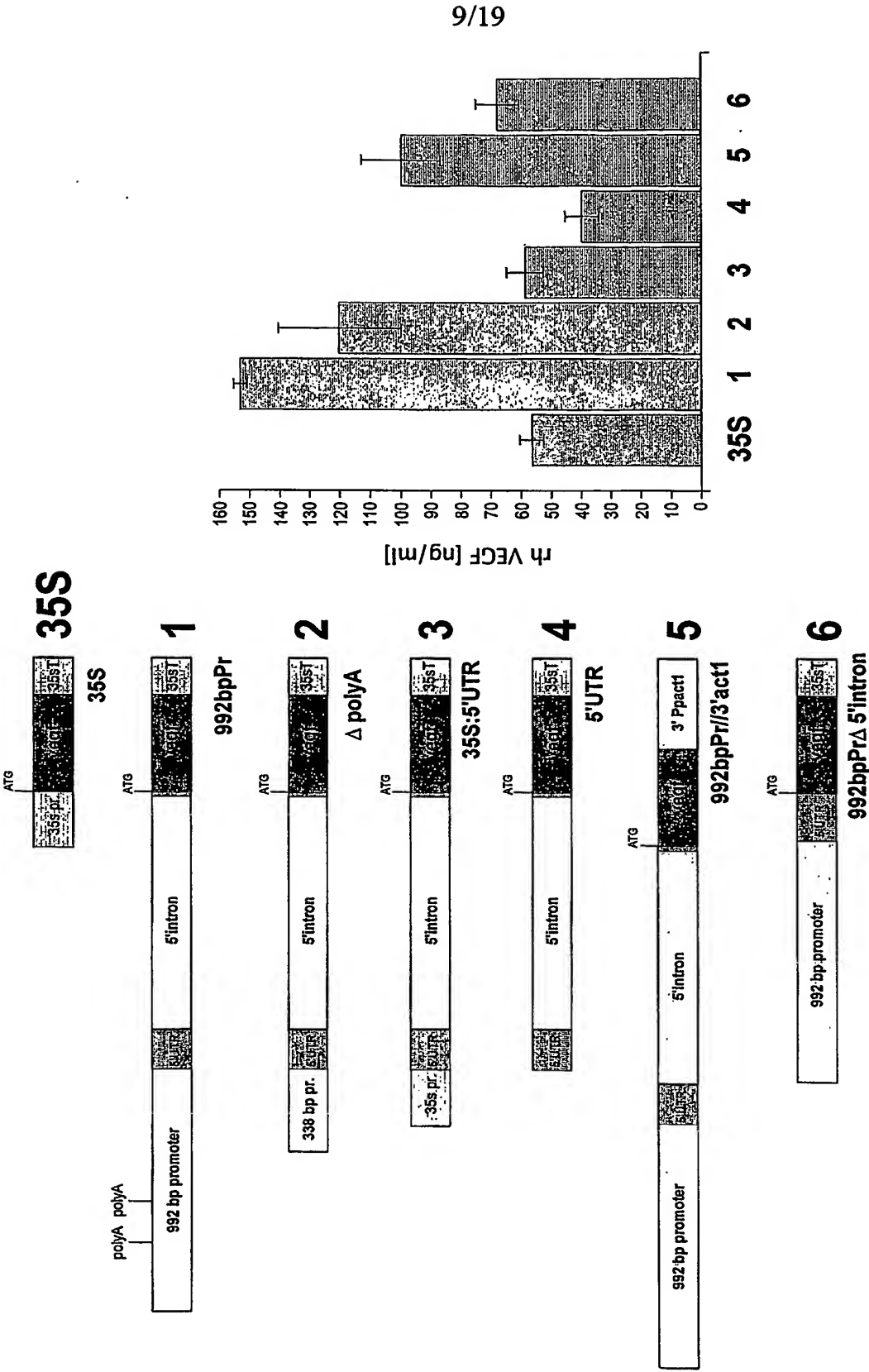


Fig. 9: Ppact1 constructs.

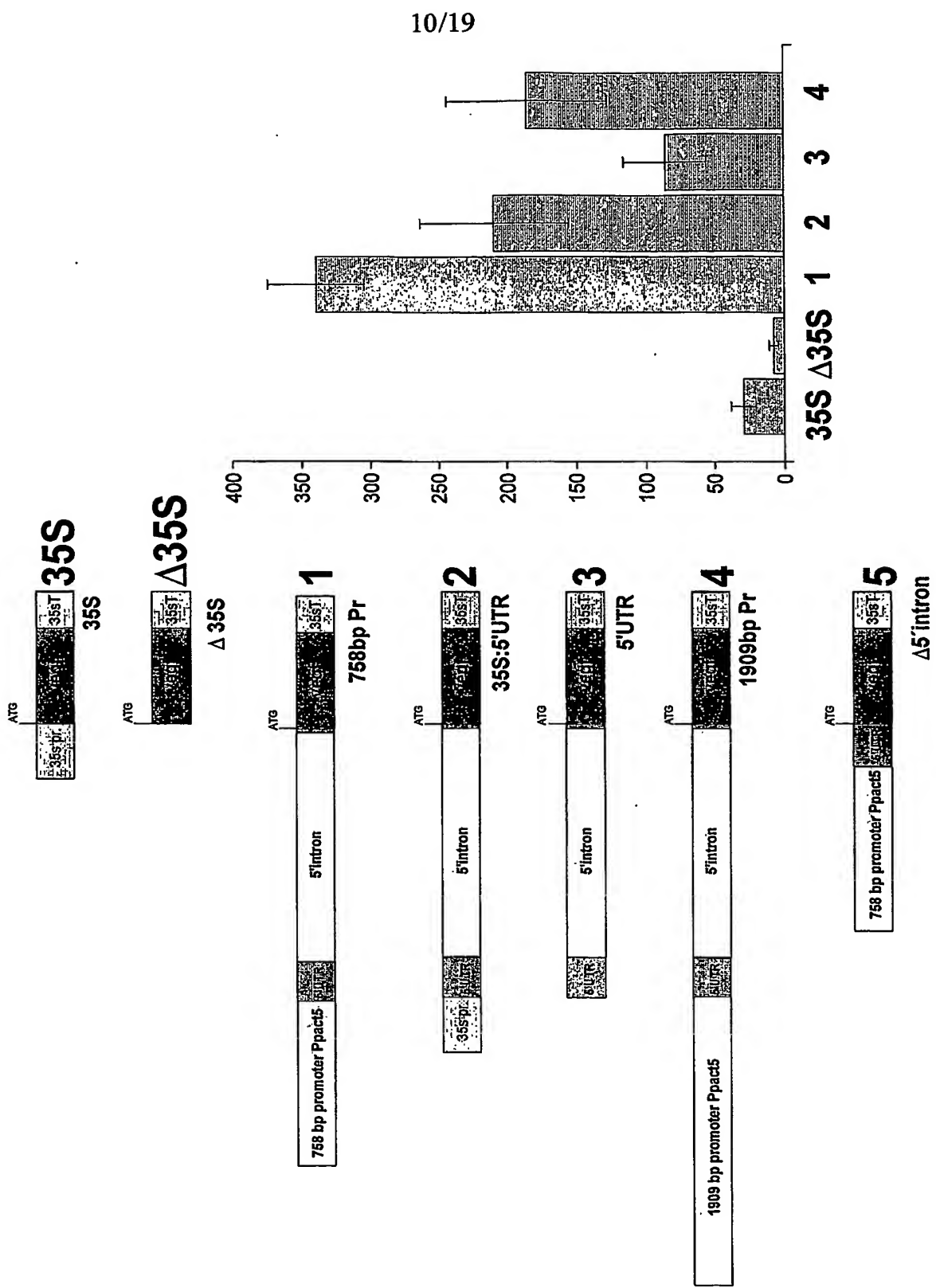


Fig. 10: Ppact 5 constructs.

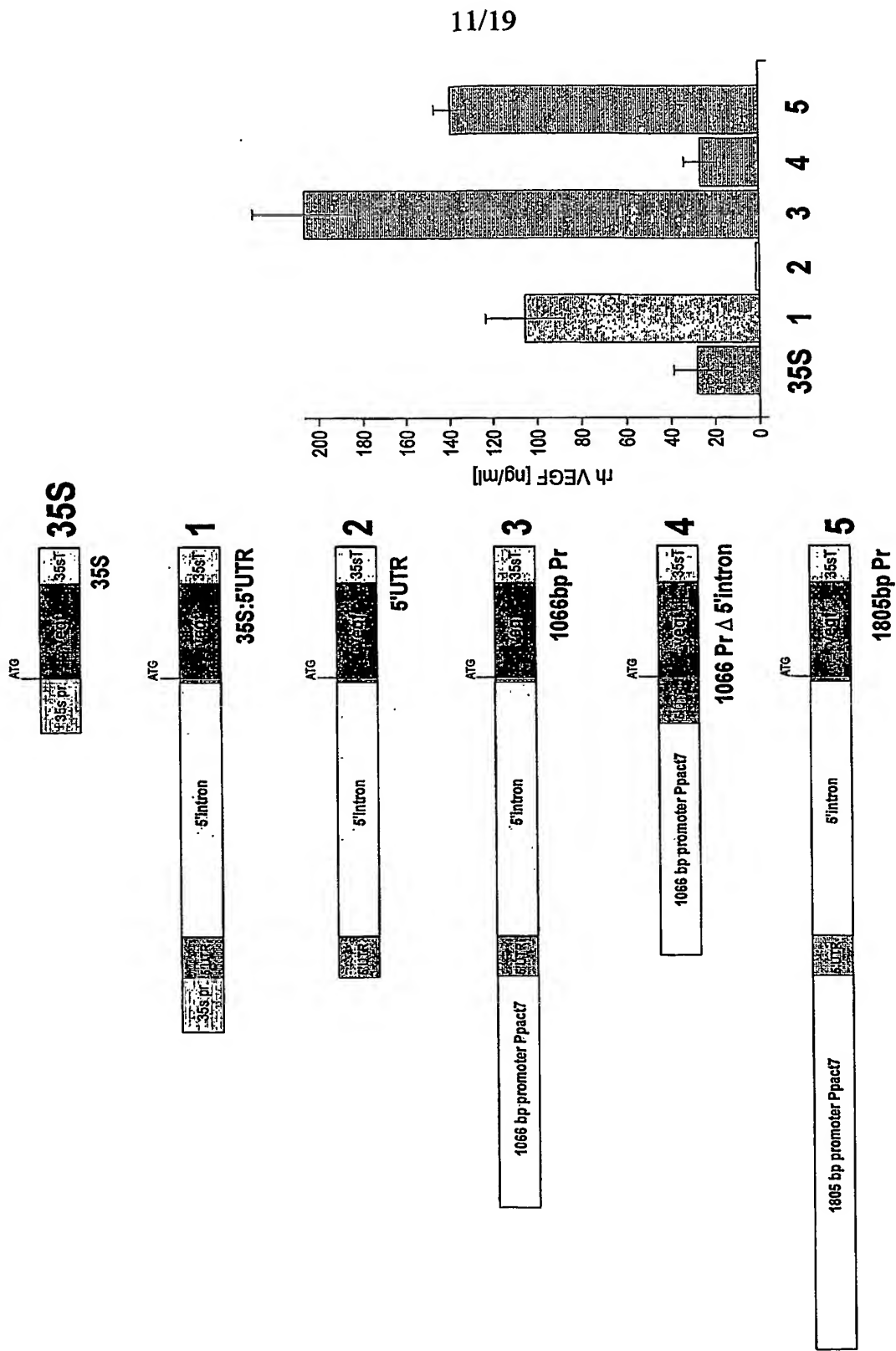


Fig. 11: Ppact 7 constructs.

12/19

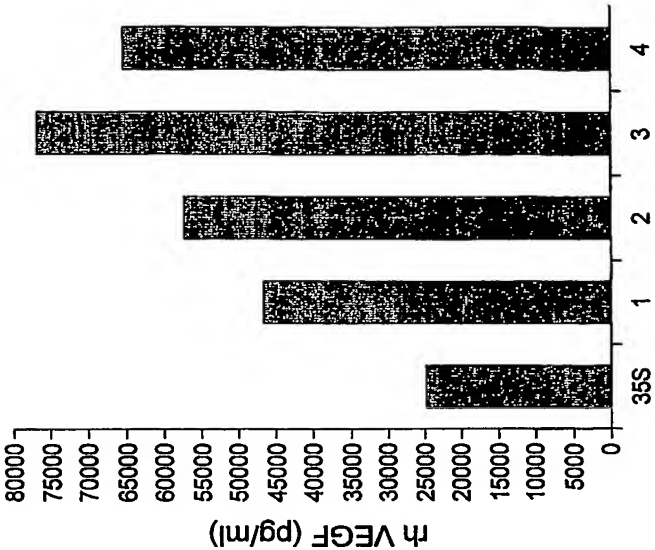
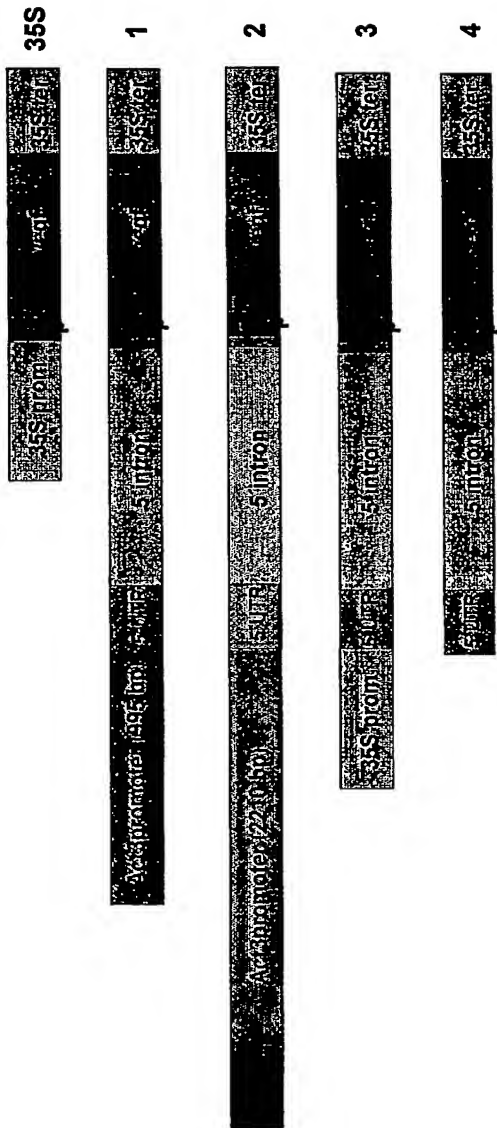


Fig. 12: Pp act3::vegf constructs.

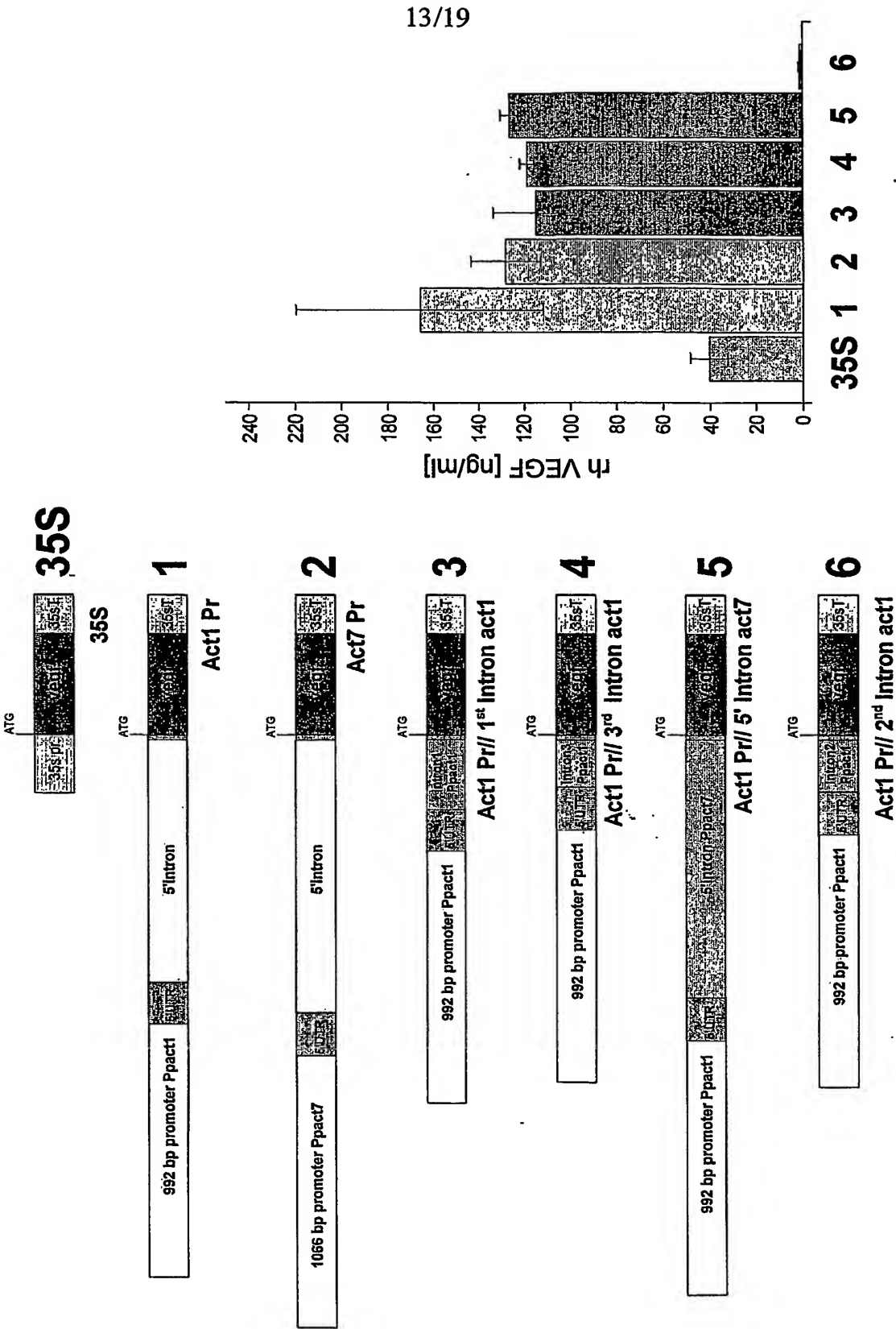


Fig. 13: Ppact1 promoter:5' intron substitutions.

Fig. 14: Ppact1 promoter:vegf deletion constructs.

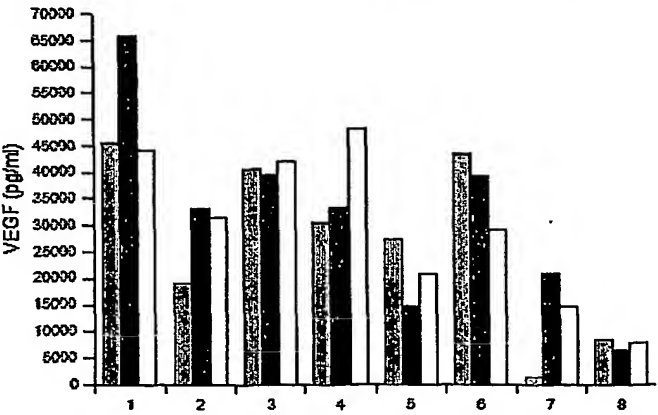
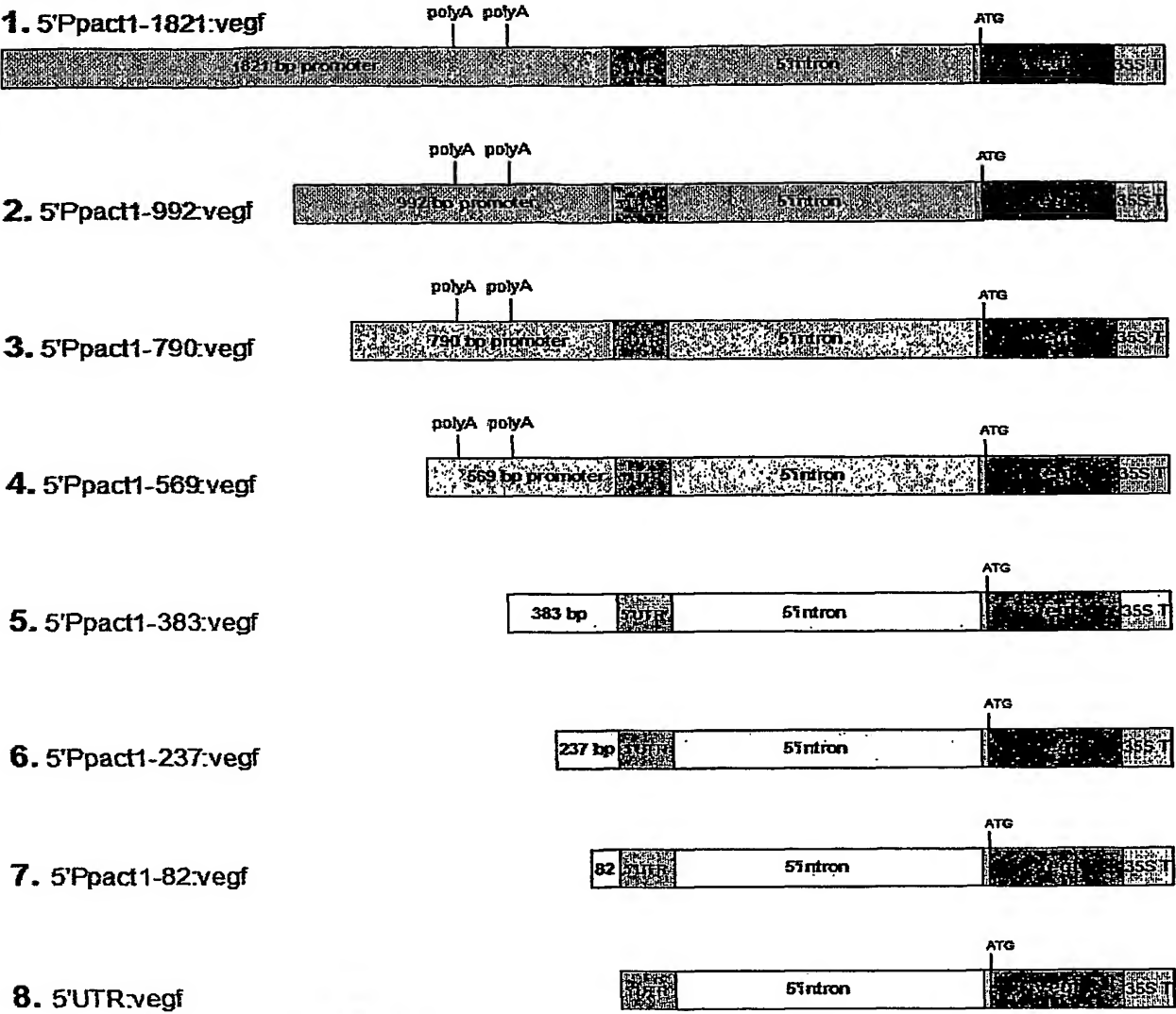


Fig. 15: Ppact3 promoter:vegf deletion constructs.

1. 5'Ppact3-2208:vegf



2. 5'Ppact3-992:vegf



3. 5'Ppact3-821:vegf



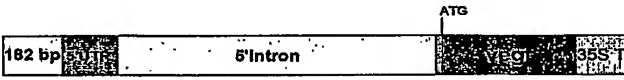
4. 5'Ppact3-523:vegf



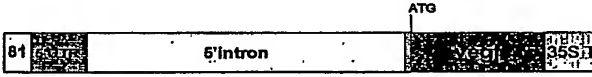
5. 5'Ppact3-323:vegf



6. 5'Ppact3-182:vegf



7. 5'Ppact3-81:vegf



8. 5'UTR:vegf

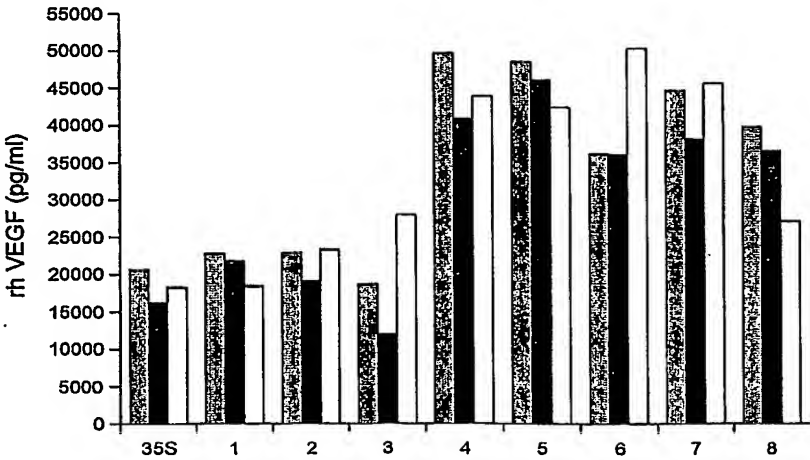
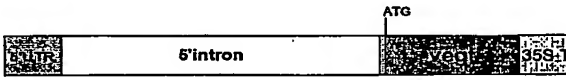
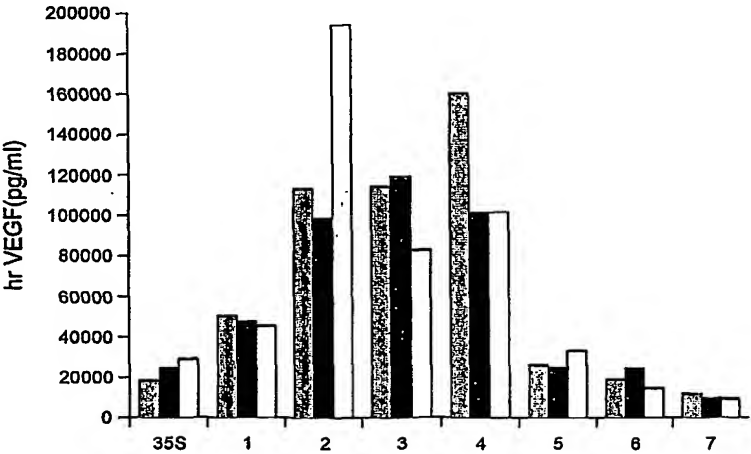
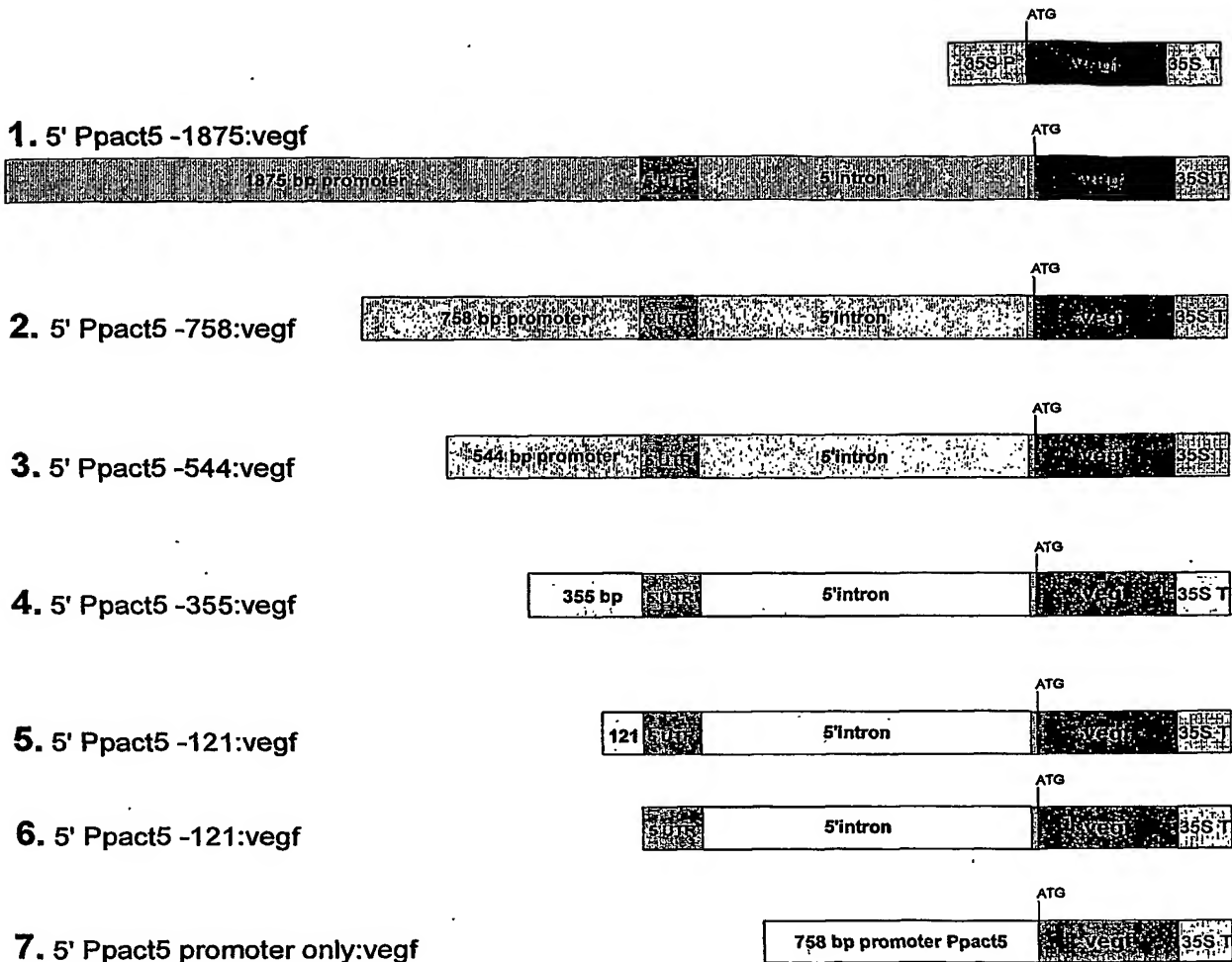


Fig. 16: Ppact5 promoter:vegf deletion constructs.



17/19

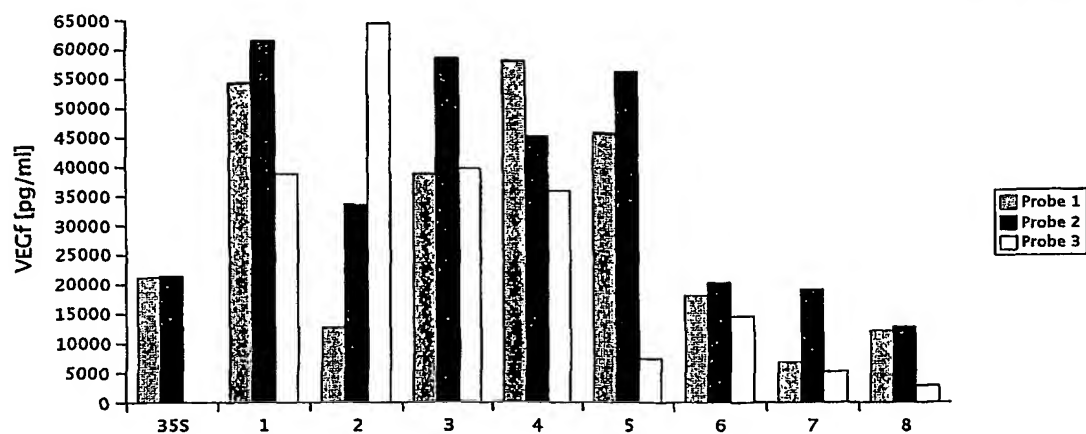
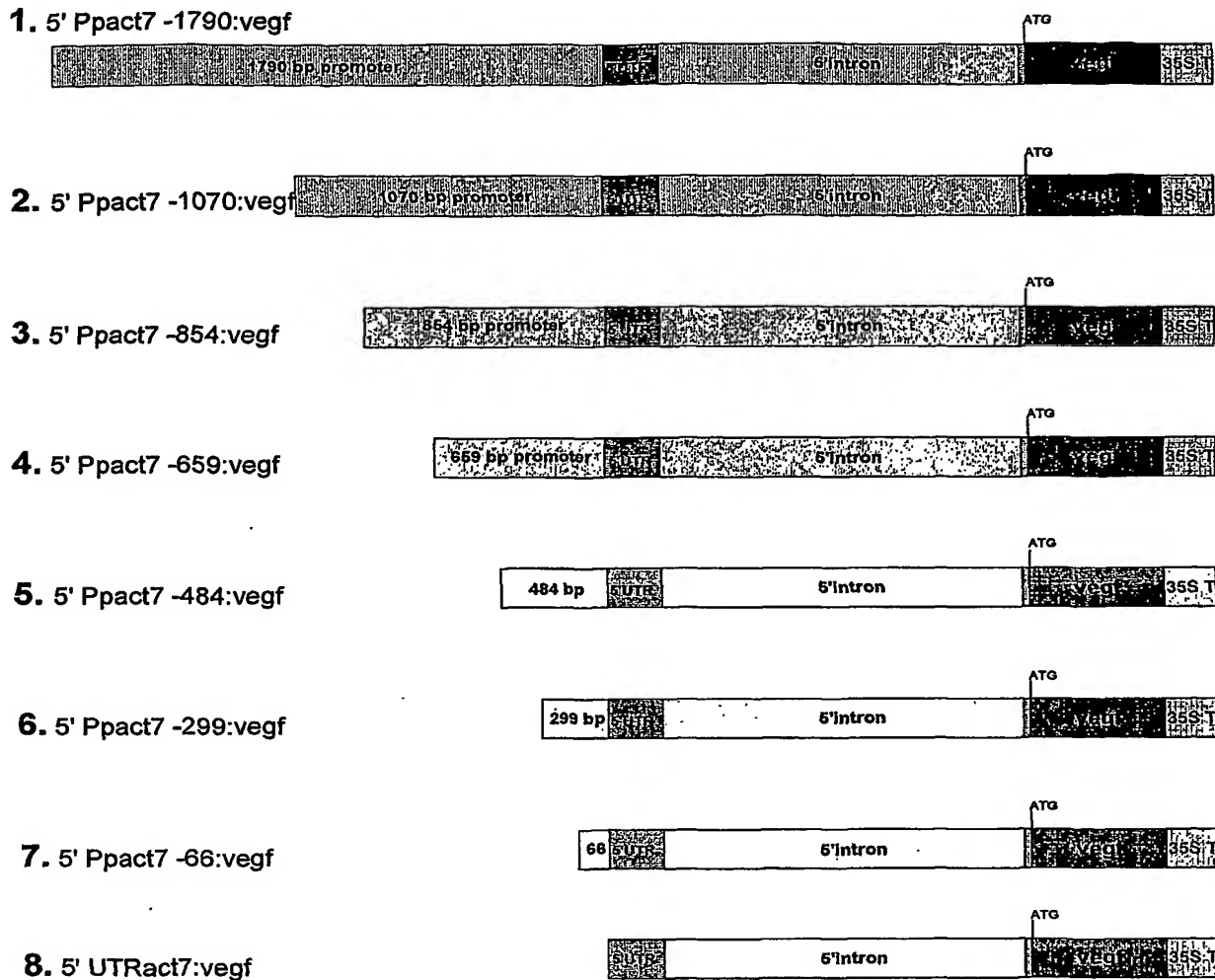
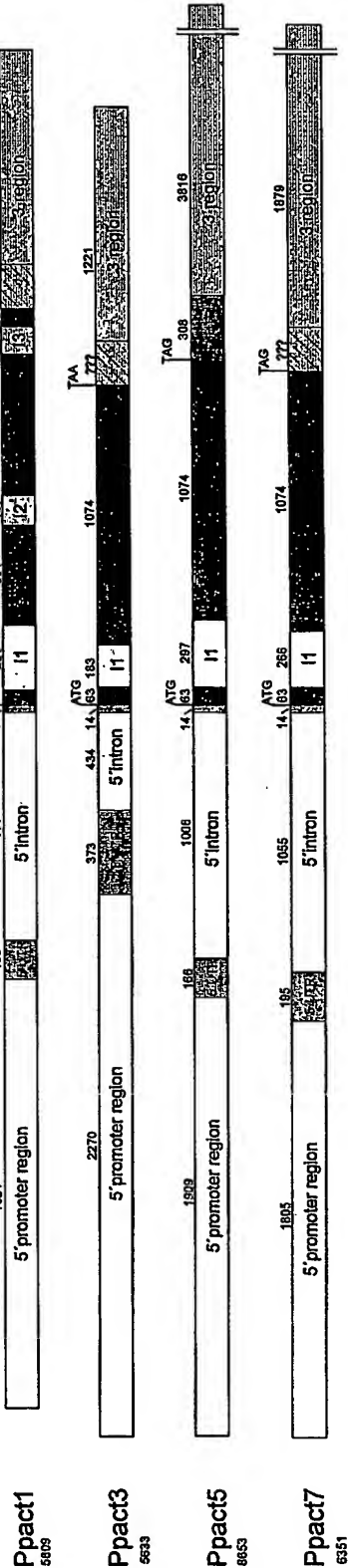
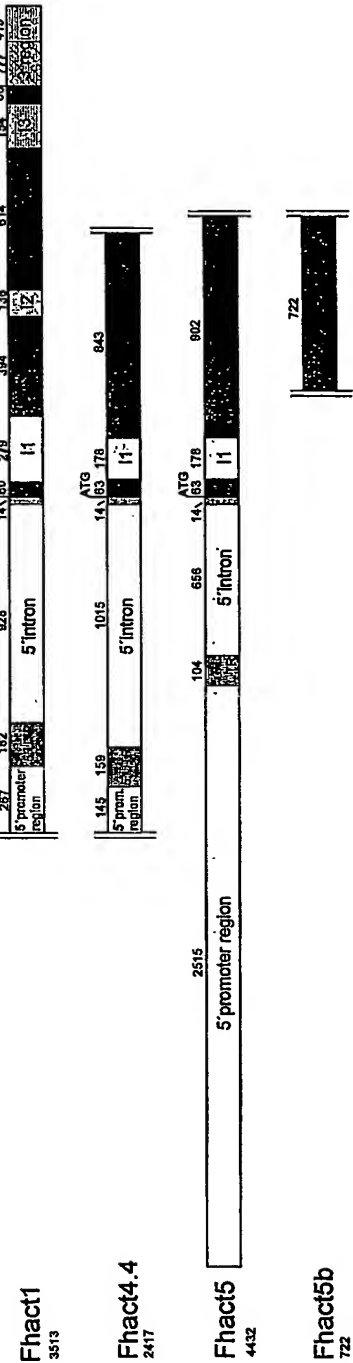
Fig. 17: Ppact7 promoter:vegf deletion constructs.

Fig.18

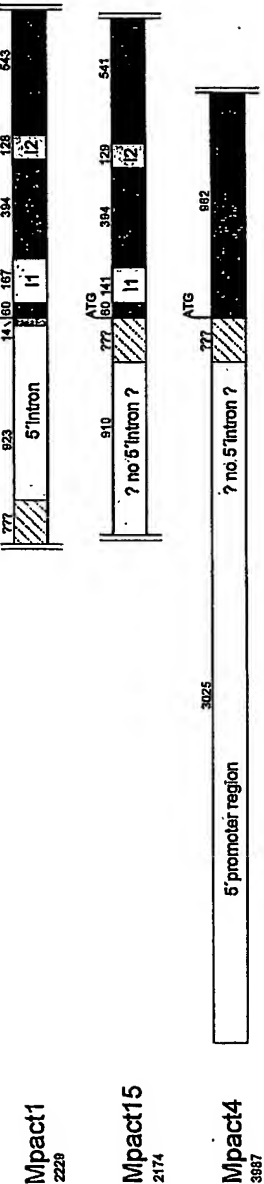
A) *Physcomitrella patens* actin genes



B) *Funaria hygrometrica* actin genes



C) *Marchantia polymorpha* actin genes



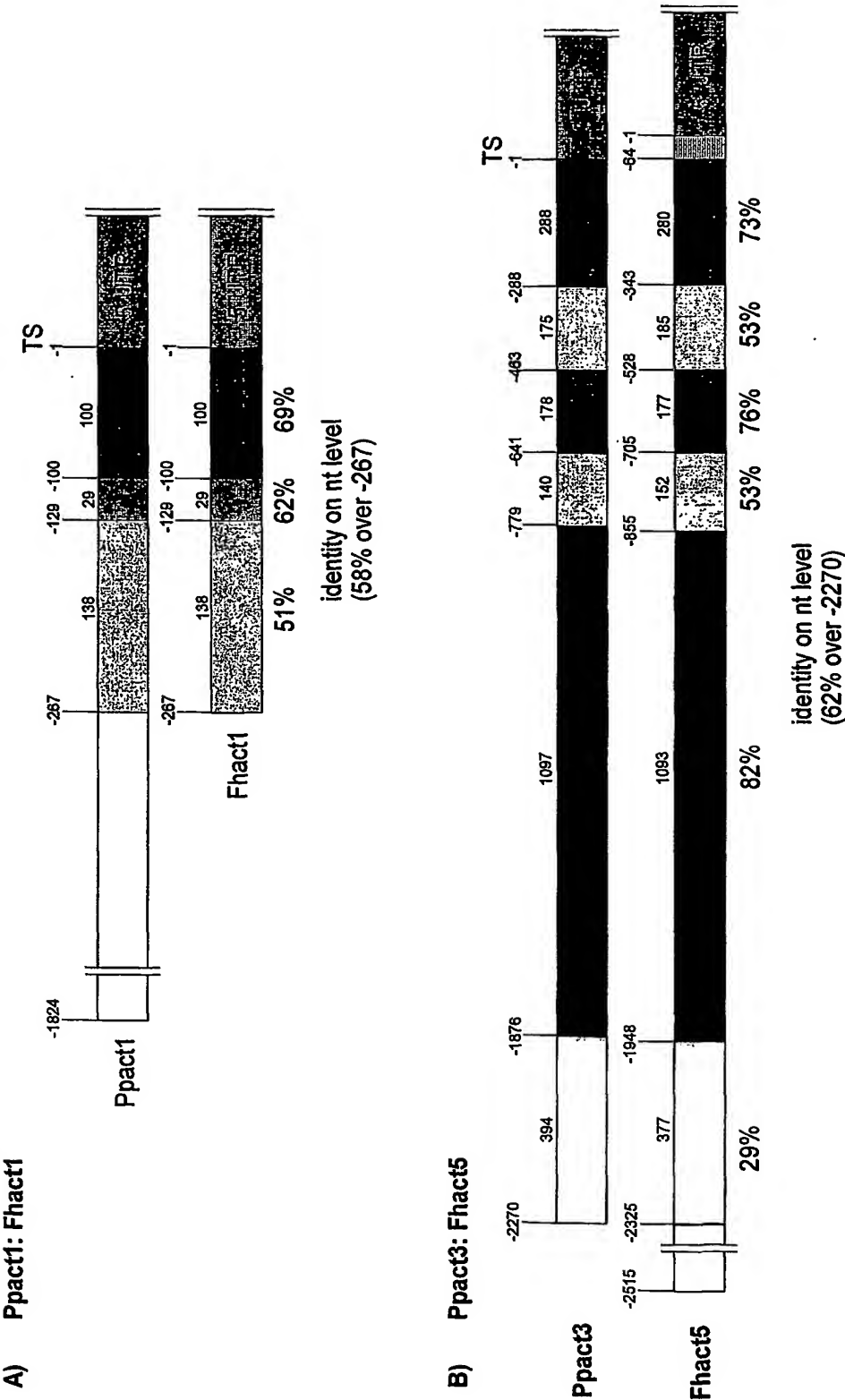


Fig.: 19 Comparison of promoter sequences of homologous actin genes from *Physcomitrella patens* and *Funaria hygrometrica*

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